CLAIMS

What is claimed is:

1. A method of providing antibacterial activity to a surface of a body using nano-sized metal particles, comprising:

coating a volatile solution dispersed with nano-sized metal particles onto the surface of the body; and

thermally treating the coated body wherein the nano-sized metal particles are deposited onto the body].

2. The method according to claim 1, further comprising drying the coated body before thermally treating the body coated with the nano-sized metal particles.

3. The method according to claim 2, wherein the thermal treatment operation is performed at 50-150°C to prevent deformation of the body.

4. The method according to claim 3, wherein the thermal treatment operation is performed at 150°C to prevent deformation of the body.

5. The method according to claim 2, wherein the nano-sized metal particles used in the coating operation are used in an amount of 100-2000 ppm, based on the volatile solution.

6. The method according to claim 5, wherein the nano-sized metal particles used in the coating operation are used in the amount of 1000 ppm, based on the volatile solution.

7. The method according to claim 5, wherein the nano-sized metal particles have a sterilizing function.

8. The method according to claim 7, wherein the metal particles having the sterilizing function are any one selected from the group consisting of silver (Ag), aluminum (Al), copper (Cu), iron (Fe), zinc (Zn), cadmium (Cd), palladium (Pd), rhodium (Rh) and chrome (Cr).

9. The method according to claim 7, wherein the body is a home appliance selected from among refrigerators, washing machines, and air conditioners.

10. The method according to claim 7, wherein the body is a filter for air cleaners.

11. An air cleaner comprising the filter having antibacterial activity according to the method of claim 10.

12. The method according to claim 3, wherein the nano-sized metal particles used for the coating operation are used in an amount of 100-2000 ppm, based on the volatile solution.

13. The method according to claim 12, wherein the nano-sized metal particles used for the coating operation are used in the amount of 1000 ppm, based on the volatile solution.

14. The method according to claim 12, wherein the nano-sized metal particles have a sterilizing function.

15. The method according to claim 14, wherein the metal particles having the sterilizing function are any one selected from the group consisting of silver (Ag), aluminum (Al), copper (Cu), iron (Fe), zinc (Zn), cadmium (Cd), palladium (Pd), rhodium (Rh) and chrome (Cr).

16. The method according to claim 8, wherein the body is a home appliance selected from among refrigerators, washing machines, and air conditioners.

17. The method according to claim 8, wherein the body is a filter for air cleaners.

18. An air cleaner comprising the filter having antibacterial activity according to the method of claim 17.

19. The method according to claim 1, wherein the nano-sized metal particles have an average particle size of 500 nm or smaller.

20. The method according to claim 19, wherein the nano-sized metal particles have an average particle size of 300 nm or smaller.

21. The method according to claim 19, wherein the nano-sized metal particles have an average particle size of 3-250 nm.

22. The method according to claim 1, wherein the coating of the volatile solution with nano-sized metal particles onto the surface of the body comprises deposition.

23. The method according to claim 22, wherein the deposition includes an ion-adsorption reduction method, in which only silver is selectively attached onto the body bue use of electrolysis of silver solution.

24. A method of providing antibacterial activity to a surface of a body using nano-sized metal particles, comprising depositing the nano-sized metal particles onto the surface of the body.